REMARKS

Support for our Amendment and the subject matter of the newly proposed Claims 20 and 21 is found, for example in our specification, starting at Page 13, Line 9 through Page 14, Line 8.

The information can be found as follows:

> The ES 240 section contains input PIDs 241, output PIDs 242, and empty flags 243.
>
> The empty flags 243 are indicators of the processing that takes place when the input testing unit 104 has judged that a portion of the received ES (Elementary Stream) is irregular. A processing model empty flag 243 bring "1" indicates that an empty carousel is to be outputted instead of the ES in which irregularity has been detected. Here, the empty carousel refers to a transmission method using a data broadcast which is empty of content, and is defined by the ARIB (Association of Radio Industries and Businesses) standard. When the empty flat 243 is "0," the processing continues as if the TS is normal. In other words, even if the inputted packets are broken, they are outputted as they are, and if there is no input, nothing is output. Note here that other content may be transmitted instead of the empty carousel. (underline added)

Attached to the current Amendment is an English translation of "Operational Guidelines for Digital Satellite Broadcasting" of the ARIB referred to in our specification for informational purposes.

Our invention permits a conversion unit and a content transmission device to have an option of outputting an empty carousel when irregularity has been detected in an irregular-case conversion processing procedure. In this event, a receiving reception device has the ability to appropriately process the empty carousel without receiving any broadcast data containing errors.

The Office Action contended that Claims 1, 3-5, 15-17 and 19 were completely anticipated by *Urdang* (U.S. Patent Publication 2004/0078811).

In this regard, the Office Action referred to a capacity of having a storing unit in Paragraph 0024 as a buffer 420 with a capability of storing the content of a broadcast and

associated metadata files. The Examiner contended that it was well known that a processor can execute instructions/steps/routines stored in the memory, and specifically referred to the flowchart of Figure 4 for teaching both a processing of a normal and irregular processing (citing steps 540-570).

Actually, the *Urdang* reference basically teaches a person of ordinary skill in this field to address an issue where actual start and end times for any given broadcast program may be different than a predetermined electronic programming guides (EPGs). As can be appreciated, this is an issue that can occur, for example, a sporting event such as golf, that is delayed by rain.

Thus, if a time variance is determined that meets a certain threshold, the content of the program can be redefined. This can be found, for example, in Paragraph 0028 as follows:

> If the first time difference has an absolute value greater than the first predetermined threshold, it follows that the received programming content lacks a beginning portion of the given program. In that case, the processor looks up a code identifying the preceding program, obtains a copy of an end portion of the preceding program identified by the code, and attaches the end portion.

As can be appreciated, however, *Urdang* does not address the current features of our invention wherein a conversion unit can output an empty carousel when an irregularity has been detected in the irregular-case conversion proceeding, as set forth in our independent claims. This difference can be summarized as follows.

Therefore, as a result of the aforementioned processing disclosed in *Urdang*, namely "if the first time difference has an absolute value greater than the first predetermined threshold, it follows that the received programming content lacks a beginning portion of the given program. In that case, the processor looks up a code identifying the preceding program, obtains a copy of an end portion of the preceding program identified by the code, and attaches the end portion," the

reception device receives the end portion of the preceding program twice, causing the viewer to watch an unnatural program.

On the other hand, in the invention of Claim 1, the conversion unit outputs an empty carousel when irregularity has been detected in the irregular-case conversion processing. Therefore, the reception device receives and appropriately processes an empty carousel without receiving broadcast data containing errors, as described above. As a result, the viewer does not notice that the carousel was broadcast, and thus not feel any unnaturalness.

The Office Action rejected Claims 2 and 11 as unpatentable over *Urdang* in view of *Shinohara* (U.S. Patent Publication 2002/0135698).

The *Shinohara* reference is directed to a problem in a conventional broadcasting systems where a service information signal is limited in interacting with pre-installed application tables for presenting a program table. The *Shinohara* invention was an effort to provide in an EPG service, a change in program information real time when the content of the program control information can be merged with the content of the program scheduling information and thereby merged. This is set forth in the teachings of *Shinohara*, as follows:

> The merging means 106 compares multimedia EPG program scheduling information location..., and checks as to whether or not starting time/duration of program is changed within the same program (step 801). If there is the changed starting time/duration of the program, then the merging means 106..., and rewrites the starting time/duration of the program which is described in the corresponding file (step 802) (Paragraph 0037).

The secondary reference that was cited, for example *Newman* (U.S. Patent Publication 2003/0189668) in combination with *Urdang* to reject Claim 6, was directed to an automatic programming system (APS) wherein pieces of identity information can be used as triggers to generate the automatic programming system.

Thus, as set forth in Paragraph 0047, "the ITV coordination authority 100 has logic to generate appropriate content trigger 235 for the appropriate ITV content server 220." As can be appreciated, other than this triggering function, the *Newman* reference does not address the deficiencies of the *Urdang* reference, and cannot render obvious our present invention.

Claim 7 was also rejected as being obvious over *Urdang* in view of *Elcock et al.* (U.S. Patent Publication 2005/0071874). This reference basically suggests in Paragraph 0033, updating an EPG broadcast time to be sent to a set top box, as follows:

> ...the STB 106, 108 displays a notification to the end user indicating the date and time of broadcast of the miss request... .

Hobrock et al. (U.S. Patent Publication 2004/0247122) was cited in combination with *Urdang* to reject Claim 8. Again, the only apparent relevant teaching of the *Hobrock et al.* reference is detecting the difference in a packet ID in Paragraph 0086, as follows:

> The bit-wise serial method makes a bit-wise comparison of the input PID versus each PID in the comparison table.

Claims 9 and 10 were rejected over *Urdang* in view of the *Hobrock et al.* reference, when further taken in view of *Pekonen* (U.S. Patent Publication 2005/0220147). The *Pekonen* reference would teach a person of ordinary skill in this field to be concerned about power demands on a receiver, particularly a mobile terminal that was equipped to receive digital broadband transmissions.

More specifically, a time division multiplexing method was taught to provide bursts of discontinuous transmissions. The Office Action contended that a conversion unit could carry out "an irregular conversion processing," citing Paragraph 0036. This paragraph, however, simply teaches the following checksum procedure, to a person of ordinary skill in the field, and does not address the features of our present claims:

> ...a controller 500 carries out error checking based on the CRC 320 and/or checksum 330 information provided with each packet 300 in the burst 210.

The *Kovacevic* (U.S. Patent Publication 2002/0172198) was relied upon to reject Claim 12 over the *Urdang, Shinohara* and *Kovacevic* references. *Kovacevic* was cited for teaching modules in a packet form with a judgment of determining whether the packets were complete. It does not teach the advantages of our present claims.

Wallace (U.S. Patent Publication 2004/0010524) was cited for rejecting Claim 13 along with the *Urdang* and *Shinohara* references. *Wallace* addressed a particular judgment decision in determining whether a module length would match an actual data length of a received module. Thus, as set forth in Paragraph 0049, the following was taught:

> ...check the file sizes listed to see if they have changed. ... . Alternatively, whether a file has changed also could be determined by comparing a file size to determine if it has changed from the preceding index file.

As can be appreciated, checking the file size does not teach either the concept or the structure of employing an empty carousel which can be output by the conversion unit upon the detection of an irregular-case conversion process.

Finally, Claim 14 was rejected upon the original *Urdang* publication in view of a second *Urdang* (U.S. Patent Publication 2004/0010807). The second *Urdang* reference, however, only teaches the concept of broadcasting data in an Internet protocol transport stream, as follows:

> The generated program signal transport streams are typically transmitted from headend 22 and hub 24 via Internet Protocol ("IP") transport over optical fiber (Paragraph 0048).

Applicant respectfully submits that the current independent Claims 1, 17 and 19, along with claims dependant therefrom, are allowable over the art of record.

> "[A]nticipation by inherent disclosure is appropriate only when the reference discloses prior art that must *necessarily* include the unstated limitation. . . ."
>
> *Transclean Corp. v. Bridgewood Services, Inc.,* 290 F.3d 1364, 62 USPQ2d 1865 (Fed. Cir. 2002)

Additionally, applicant further submits that our present claims are not obvious.

> ("[I]n considering more than one reference, the question always is: does such art suggest doing the thing the [inventor] did.") According to the "motivation-suggesting-teaching" test, a court must ask "whether a person of ordinary skill in the art, possessed with the understandings and knowledge reflected in the prior art, and motivated by the general problem facing the inventor, would have been led to make the combination recited in the claims." *Alza Corporation v. Mylan Laboratories, Inc. et al*, 464 F.3d 1286, 1290 (Fed. Cir. 2006)
>
> (underline added)

It is appreciated that in a relatively crowded field, the zeal of the patent examining procedure may encourage a relatively broad interpretation of the actual teachings of references. It is submitted, however, that the present claims more than adequately define the novelty of our invention and are worthy of patent protection, and an early notification of the same is requested.

If the Examiner believes a telephone interview will assist in the prosecution of this case, the undersigned attorney can be contacted at the listed telephone number.

Very truly yours,

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